

REMARKS

The claims in the application remain 1-21.

Favorable reconsideration of the application as amended is respectfully requested.

The present amendment is being made in accordance with a telephone interview between the Examiner in charge of the above-identified application at the Patent and Trademark Office and undersigned attorney on Thursday, January 25, 2007. The courtesy extended by the Examiner in conducting the telephone interview is greatly appreciated.

More specifically, independent Claim 1 has been amended as discussed during the telephone interview, namely to delete the paragraph "a conduit circuit (11) containing hydraulic liquid, connected to the hydraulic drive means (1)" and recite instead – a single pump (12) having a first outlet connected to a first port of said hydraulic drive means (1) by a first passage and a second outlet connected to a second port of said hydraulic drive means (1) by a second passage – (reference is being made to preferred embodiments of the present invention illustrated in the drawings of the present application).

The last paragraph of independent Claim 1 has also been revised to recite – at most a single valve (15) is positioned in one of said first and second passages and structured and arranged to fix the hydraulic drive means (1) in position when closed (a passive valve), and said single pump (12) has only two outlets – (Please see Interview Summary PTO-413). This amendment eliminates the rejection under 35 U.S.C. §112, second paragraph, raised on page 2 of the Final Office Action.

Claims 1-5, 12-18 and 20 have been rejected under 35 U.S.C. §102 as being anticipated by U.S. Pat. No. 5,144,801 to Scanderbeg et al, while Claims 1-3, 5-12 and 18-21 have been rejected as anticipated by U.S. Pat. No. 4,761,954 to Rosman and Claims 1-3, 5 and 12-14 rejected as anticipated by DE 4,328,906. As pointed out during the telephone interview, Rosman shows a cylinder 17 with just one port, unlike the claimed system in which the hydraulic drive means 1 comprise two ports (with a single pump 12 having a first outlet connected to the first port of the hydraulic drive means 1 by a first passage and a second outlet connected to a second port of the hydraulic drive means 1 by a second passage).

Additionally, independent Claim 1 has been amended to recite the single pump 12 has only two outlets. As also pointed out during the telephone interview, pump 53 shown in Fig. 5 of Scanderbeg et al comprises three ports 55, 57 and 59, with port 59 leading to the line comprising variable volume chamber 69 and check valves 71 and 73 (column 6, lines 10-25).

Furthermore, pump 12 in Fig. 1 of DE 43 28 906 also comprises three ports A, B and C, with port C leading to the line comprising “reservoir” 14 and check valves 15. It is again respectfully pointed out that as described, e.g., in the background portion of the present application, the present invention explicitly improves over prior art hydraulic systems in which fluid flow is controlled by a series of valves such as throttle or directional valves. Such control with valves generate heat, in turn necessitating expensive cooling arrangements.

In contrast, with the present invention hydraulic fluid flow is substantially controlled only by the pump 12 in the hydraulic system. In other words, flow of hydraulic fluid to and from a cylinder 1 forming part of the hydraulic means is not controlled by any valves in the fluid flow circuit 11 in which the pump 12 and cylinder 1 are positioned. As described, e.g., in the summary portion of the present application, unnecessary generation of heat and concomitant energy loss are avoided, while the pump 12 need only be powered when the hydraulic cylinder 1 is actually operated. Furthermore, work from the pump 12 is directly related to controlling the hydraulic means 1.

Thus, e.g., smaller movement of the piston 2 within the cylinder 1 requires less work by the pump 12. Less overall hydraulic fluid is required in the inventive system with need to superfluously circulate hydraulic fluid to maintain desired control having been eliminated. The motor 13 arranged to power the pump 12 can also be used for regenerating energy obtained from the hydraulic drive means 1 (no further devices for regenerating energy need be required).

These and other advantages are explicitly attained by the invention as recited in amended independent Claim 1 herein and which is neither disclosed nor suggested by any of Rosman, Scanderbeg et al or DE 43 28 906.

Accordingly, in view of the forgoing amendment, accompanying remarks and telephone interview in the above-identified application, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions. The requisite papers for filing a Request for Continued Examination (RCE) are enclosed together with the appropriate RCE filing fee.

Early favorable action is earnestly solicited.

Respectfully submitted,



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